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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,604	11/13/2001	Takahiro Unno	TI-29771	7107
23494	7590	02/17/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			OPSASNICK, MICHAEL N	
			ART UNIT	PAPER NUMBER
			2655	

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/054,604

**Applicant(s)**

UNNO, TAKAHIRO

**Examiner**

Michael N. Opsasnick

**Art Unit**

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on received on 12/5/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 2 is/are allowed.
- 6) ☒ Claim(s) 3-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Upon further search of the prior art, relevant prior art has been published after the date of the final office action (dated 7/12/05); therefore, the finality of the office action date 7/12/05 is removed, and prosecution on the merits of this application is reopened.

#### ***Specification***

2. The disclosure is objected to because of the following informalities:

On page 1 of the specification, cross references to related patent applications have been left blank. Examiner notes that the date has been filled in, but not the complete application number. Please see 37 CFR 1.78 and MPEP § 201.11 for proper formats. Appropriate correction is required.

3. Claims 1-2 are allowed over the prior art of record.

4. The following is an examiner's statement of reasons for allowance:

As per independent claim 1, the limitations pertaining to the detailed structure of the perceptual layers of the encoder, along with the claimed feedback interconnectivity of the layers so that weaker filters are incorporated into the system as a function of the previous layer filter, is not explicitly taught by the prior art of record.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Drawings 2a-2b, and specification, page 5, paragraph labeled "2. Encoder Details" to page 6, end of first full paragraph) in view of Gao et al (6961698).

As per claim 3, Applicant's Admitted Prior Art teaches a layered encoder with an estimator for each layer of a layered encoder and perceptual filters including inverse filters for each layer (Applicant's Admitted Prior Art - drawings 2a-2b, and specification, page 5, paragraph labeled "2. Encoder Details" to page 6, end of first full paragraph). However, as discussed by this passage, Applicant's Admitted Prior Art does not explicitly teach varying the filtering such that one of the layer perceptual filters is weaker than that of another layer perceptual filter; however, Gao et al (6961698) teaches in a variable rate encoder/decoder (fig.

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1), the filtering varies among the different types of encoding/decoding → Fig 4, with Type 0 and Type 1, with different bits representing different stages, along with varying pulse codebook design in the fixed codebook, along with varying adaptive codebook structures; which is dictated by the rate selection and type classification (fig. 9); with the selector choosing among other types, an H type selector and F type selector (Fig. 2, subblocks 68 and 78); which, as further defined in Fig. 3, subblocks 90 and 92, wherein the filters are different from another, and especially, weaker (col. 54 lines 1-4). Therefore, it would have been obvious to one of ordinary skill in the art of speech encoding at the time the invention was made to modify the filtering, as taught by Applicant's Admitted Prior Art, with weakened perceptual filters because it would advantageously vary the filtering to accommodate perceptual features of speech while performing low bit rate encoding (col. 4 lines 35-64).

As per claim 4, the combination of Applicant's Admitted Prior Art (Drawings 2a-2b, and specification, page 5, paragraph labeled "2. Encoder Details" to page 6, end of first full paragraph) in view of Gao et al (6961698) teaches a layered encoding signal with relatively weakened perceptual filters, as established in the rejection of claim 3 above. Furthermore, the combination of Applicant's Admitted Prior Art in view of Gao et al (6961698) teaches a decoding of a layered encoded signal (Gao, Fig. 1) wherein short term postfiltering differs for the number of layers decoded (col. 53 line 60 – col. 54 line 5 → a weaker postfilter impulse response is introduced at the second synthesis filter).

As per claim 5, the combination of Applicant's Admitted Prior Art (Drawings 2a-2b, and specification, page 5, paragraph labeled "2. Encoder Details" to page 6, end of first full paragraph) in view of Gao et al (6961698) teaches a layered encoding signal with relatively

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weakened perceptual filters, as established in the rejection of claim 3 above. Furthermore, the combination of Applicant's Admitted Prior Art in view of Gao et al (6961698) teaches a decoding of a layered encoded signal (Gao, Fig. 1) wherein the long term postfiltering is independent of the number of layers (Gao, col. 59 lines 23-36).

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see related art listed on the PTO-892 form.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

2/14/06

mno

  
RICHEMOND DORVIL  
SUPERVISORY PATENT EXAMINER